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Oral Surgery II

**University of Jordan**

**Faculty of Dentistry**

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Designed by: HindAlabbadi

**Principles of biopsy**

**Biopsy**: is the removal of a tissue from a living individual for diagnostic purposes should be carried out whenever a definitive diagnosis cannot be obtained using less invasive modalities.

After examining the patient we can recognize suspicious marks that indicate making a biopsy.

It’s a priority to fully examine the patient because you might be the first one to identify any lesions that may raise the alarm to do a biopsy. We shouldn’t always concentrate only on the patient chief complaint or the operative work without paying attention to other signs. If you see a patient with high risk factors with single or multiple, white or red lesion in the oral cavity you should stop and think of taking a biopsy.

 Biopsy is the most definitive diagnostic method in the investigations that we do.

**Biopsy has 4 major types :**

1- Cytology (smear,brush)

2- Aspiration biopsy

3- Incisional biopsy

4- Excisional biopsy

**Oral cytology**

Cytology is mainly used in gynecology and still valid in this field by making pap smear or cytology of the cervix mostly applied in the uterine cervix malignancy.

The same is applied in the oral cavity we take a scrap of cells from the oral cavity specially the buccal mucosa or the tongue

Some still use cytology in the oral cavity in the suspected tumor cells for screening purposes .

It used as an adjunct method and it doesn’t substitute taking a biopsy because it’s unreliable and has many false results.

It’s indicated where there is a large area of mucosal changes and must be monitored for dyplastic changes whether in white or red lesions specially post radiation lesions or herpes

**Technique:** the lesions is scrapped repeatedly firmly with moistened tongue depressor ,if it’s not moist it will hurt the mucosa then the cells is smeared on a glass slide then it’s fixed and stained to be seen under the microscope

**Aspiration**

Aspiration biopsy is very important it’s the use of the needle and syringe to penetrate the lesion to explore its content.

If you are unable to aspirate fluid or air this indicate that the mass is solid (probably a tumor)

Radiolucent lesions in the jaw with straw-colored fluid indicate a cystic lesion.

If the aspirated fluid has pus it indicates infectious process.

If you find both straw-colored fluids with pus then we have an infected cyst

If blood is aspirated we have to stop and raise the alarm it may indicate different lesions like aneurysmal bone cyst , central giant cell lesion or vascular malformation which is mostly dangerous, if we go for incisional or excisional biopsy it might cause a perfuse bleeding specially if it has a main feeder like external carotid.

Never be to hurry to excise a lesion without aspiration specially vascular lesions.

These lesions have special techniques in radiology which is angiography ,you can visualize the vessels by injecting a radio-opaque [contrast agent](https://en.wikipedia.org/wiki/Radiocontrast) into the blood vessel and imaging using [X-ray](https://en.wikipedia.org/wiki/X-ray) to identify the feederof the lesion and then decide if the lesion’s feeder needs to be blocked by interventional radiologist through sclerosing the vessel using foams or other materials.

Aspiration should be carried out on all lesions even intraosseus lesion we can aspirate it by making a flap and drill a hole in the bone to be able to introduce the needle into the lesion .

Technique: use 18 gauge needle on 5-10 ml syringe

You may give anesthesia before aspiration or sometimes if the lesion is superficial it doesn’t need anesthesia , it depends on the case if you believe it requires anesthesia or not.

Introduce the needle in core of the mass and then aspirate then the aspirated fluid should be sent to the lab for diagnosis .

**Fine needle aspiration**

Using 20\21 needle which is different from the needle we use in the oral cavity it’s more complex, designed to go deeper in tissues and it’s guided by ultrasound usually done by interventional radiologist

Indications

* Fluid filled cyst not necessarily in the oral cavity may be in the maxillofacial area or in the neck
* Soft tissue lesions
1. Lymph nodes
2. Thyroid gland
3. Salivary gland

Mainly in the oral cavity we do aspiration and we don’t use fine needle aspiration